



PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

A NEW RACE OF SWAINSON'S WARBLER FROM THE
APPALACHIAN MOUNTAINS

BY BROOKE MEANLEY AND GORMAN M. BOND

*Fish and Wildlife Service, U. S. Department of the Interior,
Washington, D. C.*

Since Swainson's Warbler, *Limnothlypis swainsonii* (Audubon), has always been known as one of the characteristic breeding birds of the Coastal Plain of the southeastern United States, it was a matter of considerable interest to ornithologists when a mountain-breeding population was unexpectedly discovered by Legg (Legg, 1946) and Sims (Sims and DeGarmo, 1948) in the southwestern Allegheny Plateau region of West Virginia.

Considering the fact that the rhododendron-hemlock, hardwood, and cut-over dry hillside habitat of these birds, upwards to 2000 feet in the mountains, is so unlike the canebrake habitat of the coastal populations, the writers undertook an examination of specimens from both areas for the purpose of determining whether there was any evidence of subspecific difference between the two populations.

During this study, we have confined our examination to birds taken within recent years, inasmuch as old skins tend to be somewhat faded, foxed, or otherwise museum-worn.

As a result of a rather lengthy and painstaking examination of specimens from both areas, we are convinced that, in breeding plumage, birds from the mountains are separable from those of the Coastal Plain. We have been less successful, however, in separating birds taken at other times of the year. This has been due, in part, to our inability to obtain sufficient material from all parts of the range and at all times of the year. Then too, distinctions between adult and immature birds in first fall plumage have been complicated by the fact that most specimens are unmarked as to age. We have thought it advisable, nevertheless, to present the results of our study of color differences in ventral plumage, based on the specimens and data that were available to us.

In consideration of these factors, we have been particularly careful in our examination of Audubon's type, which was collected by the Rev. John Bachman, near Charleston, S. C., almost 120 years ago. Since there is no date on the label, our only indication of the time this bird was taken is based on Audubon's statement that the bird was collected in the Spring of 1832 (Audubon, 1834:564). While there is a possibility that Audubon's type may have been a migrant representative of the mountain breeding populations, the specimen is an old skin which may have undergone considerable post-mortem change in color. In addition, the original description gives the under parts as "Brownish-gray," while

the plate in the Elephant Folio shows the under parts to have some faint trace of yellow. Therefore, the evidence is inconclusive as to the color of the under parts with respect to yellow or the absence of yellow. Since Edisto River, near Charleston, S. C., is the type locality of *Limnothlypis swainsonii* (Audubon), and since the species is known to breed in this area, Audubon's name is hereby restricted to the Coastal Plain breeding population. This leaves the mountain-breeding populations without a name, and they may be known as:

***Limnothlypis swainsonii alta*, new subspecies**
Appalachian Swainson's Warbler

Type.—Adult ♂, United States National Museum No. 362,424, Walhalla, S. C., June 25, 1940, collected by W. M. Perrygo and S. Y. Hoyt, original number 4,681.

Subspecific characters.—Similar to *Limnothlypis swainsonii swainsonii* (Audubon) of the Atlantic and Gulf Coastal Plains, but in breeding plumage with under parts more whitish, less tinged with yellow. Upper parts variable, but tending to be generally more brownish, less greenish. There is no significant size difference.

Plumages.—(Colors listed in capital letters are taken from Ridgway's *Color Standards and Color Nomenclature*, Washington, 1912.)

COASTAL PLAIN FORM.—Adult in fall (5 specimens): Strongly yellowish below, approaching Citron. Breeding plumage (15 specimens): Primrose Yellow. Immature in fall (2 specimens): Similar to breeding birds. (Note: Some birds taken in early spring still display strongly yellowish underparts, as in the fall plumage, while others are paler. Obviously some of these birds may be migrants of the paler mountain form, but we feel that possibly there is also an age factor involved. Our material and data, however, have been inadequate for any positive statement concerning this correlation.)

MOUNTAIN FORM.—Adult in fall (2 specimens): About same shade of yellow below as Coastal Plain breeding birds, but possibly duller. Practically indistinguishable from juvenile coastal birds in fall plumage. Breeding plumage (5 specimens): Almost immaculate below, but with light suffusion of Naphthalene Yellow on breast and abdomen. Immature in fall (1 specimen): Ivory Yellow.

Geographic Distribution.—Breeds in the Appalachian Mountains from West Virginia south to Georgia. Winter range unknown at present, but probably very similar to winter range of the coastal populations.

Specimens Examined.—WEST VIRGINIA: Nicholas Co., Mt. Lookout, 1 ♂; Collison Creek, 1 ♂; Fourteen, 1 ♂. NORTH CAROLINA: Asheville, 1 ♂, 1 ♀; Pisgah National Forest, 1 ♀. GEORGIA: Roswell, 1 ♂; Atlanta, 2 ♂; Augusta, 1 ♂, 2 ♀; Richmond County, 1 ♀; White County, Robertstown, 1 ♂; Beechton, 1 ♂; Macon, 2 ♂; LOUISIANA: University, 9 ♂, 3 ♀; Baton Rouge, 2 ♂, 2 ♀; Baton Rouge Parish, 3 ♂; Magnolia Crossing, 1 ♂; Baines, 2 ♂; Denham Springs, 1 ♂; Grand Isle, 1 ♀; Kleinpeter, 1 ♂; New Orleans, 5 ♂, 1 ♀. MISSISSIPPI: Vicksburg, 4 ♂; Starkville, 1 ♂. SOUTH CAROLINA: Mt. Pleasant, 1 ♀; Walhalla, 1 ♂; TENNESSEE: Shelby Co., Lucy, 4 ♂, 1 ♀; Memphis, 2 ♂, 1 ♀; Germantown, 4 ♂; Shady Valley, 1 ♂. MARYLAND: Pocomoke City, 1 ♂, Pocomoke Swamp, 2 ♂.

Acknowledgments.—The writers would like to express their appreciation for the loan of critical material to the following persons and institutions: The American Museum of Natural History, the Carnegie Museum, the Charleston Museum, the Chicago Natural History Museum, the Louisiana State University Museum of Zoology, the Museum of Comparative Zoölogy, and to Messrs. J. Fred Denton, Ira N. Gabrielson, William W. Griffin, W. A. Lunk, Richard A. Parks, George M. Sutton, and M. G. Vaiden.

LITERATURE CITED

- Audubon, John James
1834. *Ornithological Biography*, II
- Audubon, John James
1834. *Birds of America* (folio), II
- Legg, W. C.
1946. Swainson's Warbler Nests in Nicholas County
The Redstart (mimeo), XI, No. 12: 70-72.
- Sims, Eleanor, and DeGarmo, W. R.
1948. A Study of Swainson's Warbler in West Virginia
The Redstart (mimeo), XVI, No. 1: 1-8.